

REMARKS/ARGUMENTS

This Amendment and the following remarks are intended to fully respond to the Office Action mailed August 8, 2006. In that Office Action, affirmation of previously elected claims was requested. Claims 1-24 and 31-33 were examined and all were rejected. Specifically, claims 1, 14, and 31 are objected to based on a number of informalities. Claims 1-23 are rejected under 35 U.S.C. § 101 as being directed to non-statutory algorithm type subject matter. Claims 1-15 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claims 1-11, 13, and 14 stand rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent Pub. No. 2003/0079100A1 to Williams et al. Claim 31 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Williams and further in view of U.S. Patent No. 5,787,262 to Shakib et al. Reconsideration of these rejections, as they might apply to the original and amended claims in view of these remarks, is respectfully requested.

In this Amendment, claims 1-23 and 31 are amended, and claims 14 and 24-30 are canceled. No claims have been newly added.

Interview Summary

The undersigned and Tim Scull thank Examiner Cheyne D. Ly for the telephone interview conducted on December 27, 2006. During the interview, proposed amendments to the claims were discussed, in relation to the references cited in the Office Action (August 8, 2006). Examiner Ly indicated that the proposed claim amendments would distinguish the claims from the cited references. However, no agreement was reached an allowance of the claims

Allowable Subject Matter

Applicants acknowledge with appreciation Examiner Ly's indication in the Office Action that claims 32 and 33 include allowable subject matter.

Restriction Requirement

Applicants hereby affirm the election of claims 1-23 and 31-33 for prosecution in the present application. Applicants hereby reserve the right to pursue claims 24-30 in a timely filed continuation application.

Claim Objections

The Examiner objects to claims 1, 14, and 31 based on a number of informalities. Applicants respectfully request withdrawal of the objections, as claims 1 and 31 have been amended to correct the informalities, and claim 14 has been cancelled.

Claim Rejections – 35 U.S.C. § 101

Claims 1-23 are rejected under 35 U.S.C. § 101 as being directed to non-statutory algorithm type subject matter. Applicants respectfully submits that claims 1-23 as amended are in compliance with 35 U.S.C. § 101.

Claims 1 and 16 have been amended to replace the term “computer-readable medium,” with the term “computer storage media.” As described on page 8, lines 2-22 of the Detailed Description, computer storage media, as defined in the present application, does not include a carrier wave. A carrier wave is an example of communication media, which along with computer storage media make up computer-readable media. *See Detailed Description*, page 8, lines 2-22. Thus, as used in the present application, computer storage media does not include a carrier wave. Rather, it includes for example, “RAM, ROM, EEPROM, flash memory or other memory technology, CD-ROM, digital versatile disks (DVD) or other optical disk storage, magnetic cassettes, magnetic tape, magnetic disk storage or other magnetic storage devices.” *Detailed Description*, page 8, lines 6-13. Accordingly, amended claims 1 and 16 are directed to statutory subject matter.

Applicants submit that claims 1 and 16, as amended, include embodiments which produce tangible, concrete, useful results. Claims 1 and 16 have been amended to delete the “if” statements previously recited in the claims. The claims now affirmatively recite determining, updating, and/or preventing. Specifically, claim 1 has been amended to recite “determining whether the first fence value is of higher precedence than the second fence value; and updating content residing on the second machine based on the determining.” With this amendment all the embodiments of claim 1 produce a useful, concrete, and tangible result, namely updating content on a second machine.

Claim 16 has been amended to remove the “if” statements and recite “preventing propagation from the second machine based on the fence value of the second resource indicating

that the second resource should not be propagated; and updating the second resource from the first resource based on the fence value of the first resource having a higher precedence than the fence value of the second resource.” The amendment to claim 16 eliminates any embodiments that the Office Action asserts does not produce a useful, concrete, and tangible result.

Applicants respectfully submit that the amendments to claims 1 and 16 address the Examiner’s rejections, and therefore newly amended claims 1 and 16 are directed to statutory subject matter. Claims 2-15 and 17-23 depend upon claims 1 or 16, and are also directed to statutory subject matter for the same reasons as described for claims 1 and 16. Withdrawal of all of the rejections under 35 U.S.C. § 101 is respectfully requested.

Claim Rejections – 35 U.S.C. § 112

Claims 1-15 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants respectfully traverse this rejection.

Claim 1 has been amended to clarify that the “resource” on the second machine is being updated. Applicants believe this addresses the Examiner’s rejection, and withdrawal of this rejection is kindly requested.

Claim 14 has been cancelled.

Applicants respectfully disagree with the objection to claim 31 based on the term “another machine independently from other meta-data,” and submit that all of the terms in claim 31 meet the legal requirements of definiteness. The context of claim 31 makes clear the meaning of the term “another machine independently from other meta-data.” The term is used in the context of defining the term “fence value.” Specifically, claim 31 defines a “fence value” by reciting: “each fence value indicating whether its associated resource should be used to update a resource on another machine independently from other meta-data.” From plainly reading this limitation, it is clear that another machine refers to any machine excluding the machine storing the resource associated with a particular fence value. In other words, “another machine” is defined in relation to a fence value. Once a fence value is identified, another machine may be any machine (e.g., the first machine, the second machine or another machine) except the machine

storing the identified fence value. Applicants submit that “another machine” is definite, because someone of ordinary skill in the art would appreciate and fully understand the meaning of “another machine” based on the context in which it is used in claim 31. Applicants respectfully request withdrawal of this rejection.

Claim Rejections – 35 U.S.C. § 102

Claims 1-11, 13, and 14 stand rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent Pub. No. 2003/0079100A1 to Williams et al., hereinafter “Williams.” Applicants respectfully traverse this rejection, because the fence values taught by Williams are not the same as the claimed fence values, and Williams fails to disclose:

- determining whether the first fence value is of higher precedence than the second fence value; and
- updating the resource residing on the second machine based on the determining.

In embodiments, the present invention is directed to the use of meta-data associated in updating of content of a resource replicated on two machines. Specifically, in embodiments, the resource includes meta-data and content that reside on each machine on which the resource is replicated. The meta-data includes one or more values that are updated whenever the content of the resource is changed with any local update, and a fence value that is independent of any local changes to the content. The use of fence values advantageously provides a way to establish the priority of a resource independent of local changes to a resource. The fence values are used by comparing a first fence value for a resource on a first machine with a second fence value for a resource on a second machine to determine whether the first fence value is of higher precedence than the second fence value. Based on the determination (e.g., the first fence value is of higher precedence), the resource residing on the second machine is updated using the resource from the first machine. None of the references cited by the Examiner teach or suggest the use of fence values or comparing fence values to determine whether content on a machine should be updated.

Williams discloses fence keys that are distinct from the fence values in claim 1 and are used for a different purpose than the claim 1 fence values. Williams describes a method for regulating access to a storage system that stores a file system. *See Williams*, page 1, paragraph [0006]. The method uses storage keys to communicate to the file system changes in location of

data stored in the storage system, while fence keys are used to control access to the storage system. *See Id.* at paragraphs [0028] and [0062]. Fence keys are unique non-recurring values that are persisted in the storage system and are used to identify a specific process requesting to access the storage system. *See Id.* at paragraph [0069]. Each I/O request issued by a process to the storage system includes a fence key, which is used to determine whether the process is authorized to access the storage system. *See Id.* at paragraph [0063]. Williams' fence values are not used for making a determination that impacts any type of resource updating, as called for in claim 1.

For at least these reasons, claim 1 is distinct from and patentable over Williams. Claims 2-11 and 13 depend upon claim 1 and are allowable for at least the same reasons.

Claim Rejections – 35 U.S.C. § 103

Claim 31 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Williams and further in view of U.S. Patent No. 5,787,262 to Shakib et al., hereinafter “Shakib.”

Similar to claim 1, Claim 31 has been amended to recite “determining whether a fence value of a resource on one of the machines is of higher precedence than the fence value of a corresponding resource on the other machine.” As is described above, Williams does not teach or suggest this limitation. Shakib does not compensate for the deficiency in Williams. Although Shakib is directed to a method for conflict resolution in data replication systems, Shakib does not teach or suggest the combination of elements disclosed in claim 1, including the use of fence values as claimed in claim 31.

For this reason, the Applicants respectfully submit that claim 31, as amended, is in order for allowance.

Conclusion

This Amendment fully responds to the Office Action mailed on August 8, 2006. Still, the Office Action may contain arguments and rejections that are not directly addressed by this Amendment because they are rendered moot in light of the preceding arguments in favor of patentability. Hence, failure of this Amendment to directly address an argument raised in the Office Action should not be taken as an indication that the Applicant believes the argument has merit. Additionally, failure to address statements/comments made by the Examiner does not mean that the Applicants acquiesce to such statements or comments. Furthermore, the claims of the present application may include other elements, not discussed in this Amendment, which are not shown, taught, or otherwise suggested by the art of record. Accordingly, the preceding arguments in favor of patentability are advanced without prejudice to other bases of patentability.

A Petition for a two-month extension of time is being filed with this Amendment, along with the requisite fee of \$450. It is believed that no additional fees are due with this Amendment. However, the Commissioner is hereby authorized to charge any deficiencies or credit any overpayment with respect to this patent application to deposit account number 13-2725.

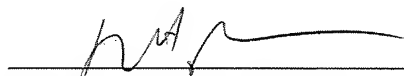
In light of the above remarks and amendments, it is believed that the application is now in condition for allowance and such action is respectfully requested. Should any additional issues need to be resolved, the Examiner is requested to telephone the undersigned to attempt to resolve those issues.

Respectfully submitted,

Dated: _____

January 5, 2007





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